



Figure 5. Percent Difference in ETD for One Sixteenth of a Mile Sections between 2.5'' and 5'' Baseline Segments – Outside Lane of I-40 (Eastbound Direction) in Durham County

5.4 Effect of Section Length on ETD

As in the case of baseline segment, the section length should be as small as possible so as to minimize the effects of pavement characteristics, geometric conditions and traffic characteristics on crash incidences on roads. In general, one-sixteenth of a mile and one-eighth of a mile is considered suitable and appropriate for this type of a study. Figure 6 shows ETD by one-eighth of a mile section using 5'' baseline segment for outside lane of I-40 (eastbound direction) in Durham County. Comparing ETD from this figure with ETD in Figure 4 (for one-sixteenth of a mile section) indicates no difference in the general trend of ETD over the sections. However, one-sixteenth of a mile tends to yield better estimates of ETD as it accounts for variations in ETD over relatively short distance. In addition, considering one-sixteenth of a mile sections minimizes the effects of variations in pavement, geometric and traffic characteristics on crash incidences. Thus, it was considered for the rest of the analyses in this study.